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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,750	05/09/2006	Christopher John Spacie	046430.021	5960
25461 7590 04/01/2008 SMITH, GAMBRELL & RUSSELL SUITE 3100, PROMENADE II 1230 PEACHTREE STREET, N.E. ATLANTA, GA 30309-3592				
EXAMINER				
THOMPSON, CAMIE S				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
04/01/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/595,750

Applicant(s)

SPACIE ET AL.

Examiner

Camie S. Thompson

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/DE)
Paper No(s)/Mail Date 5/9/06 6/8/06 8/22/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "carbon based" in line 2. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 15 provides for the use of a conductor, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 15 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01-270571 in view of Demendi et al., U.S. Patent Number 5,538,649.

The Japanese reference discloses a conductor for sliding and current collection that comprises a carbonaceous matrix that is molded under pressure and burned under an inert gas atmosphere with a wire net that is made of copper (see abstract). The Japanese reference also discloses that the step is repeated. The Japanese reference also discloses that a metal having a lower melting point than that of the copper metal is impregnated into the carbonaceous matrix. The drawings in the Japanese reference show that the metal meshes are distributed non-uniformly and no—perpendicular within the body of the collector. The Japanese reference does not disclose the same carbonaceous matrix as recited by the present claims. Demendi discloses a composition used in tribological applications such as sliding components. Also, Demendi discloses that the composition comprises a carbonaceous matrix and an additive which contains at least one compound from the group consisting of neodymium fluoride, praeosodymium fluoride, gadolinium fluoride and lanthanum fluoride as per instant claim 2 (see abstract). It is disclosed in column 3, lines 9-36 that the composition comprises coke/resins /graphite as per instant claim 1. The composition of the Demendi reference has excellent properties of chemical resistance, extremely low permeability, high mechanical strength and high modulus of elasticity (see column 2, lines 40-51). Therefore, it would have been obvious to one of ordinary skill in the art to use the carbonaceous matrix of the Demendi reference for the Japanese reference in order to have a

Art Unit: 1794

sliding and current collector that has good durability during high operating temperatures and pressures.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01-270571 in view of Demendi et al., U.S. Patent Number 5,538,649 and in further view of Solomon, U.S. Patent Number 4,459,197.

The Japanese reference discloses a conductor for sliding and current collection that comprises a carbonaceous matrix that is molded under pressure and burned under an inert gas atmosphere with a wire net that is made of copper (see abstract). The Japanese reference also discloses that the step is repeated. The Japanese reference also discloses that a metal having a lower melting point than that of the copper metal is impregnated into the carbonaceous matrix. The Japanese reference does not disclose the same carbonaceous matrix as recited by the present claims.

Demendi discloses a composition used in tribological applications such as sliding components. Also, Demendi discloses that the composition comprises a carbonaceous matrix and an additive which contains at least one compound from the group consisting of neodymium fluoride, praseodymium fluoride, gadolinium fluoride and lanthanum fluoride as per instant claim 2 (see

Art Unit: 1794

abstract). It is disclosed in column 3, lines 9-36 that the composition comprises coke/resins/graphite as per instant claim 1. The composition of the Demendi reference has excellent properties of chemical resistance, extremely low permeability, high mechanical strength and high modulus of elasticity (see column 2, lines 40-51). Therefore, it would have been obvious to one of ordinary skill in the art to use the carbonaceous matrix of the Demendi reference for the Japanese reference in order to have a sliding and current collector that has good durability during high operating temperatures and pressures. Neither the Japanese reference nor Demendi discloses a non-metallic strengthening web layer. Solomon discloses a current distributor that is laminated to an active layer of carbon material (see column 12, lines 5-44). Additionally, Solomon discloses that the current distributor is a wire mesh (copper) and is embedded in the active layer (see column 12, lines 67-68). It is also disclosed in column 12, lines 60-68 of the Solomon reference that a non-metallic backing layer is used. The backing layer is used to prevent electrolyte from coming through the active layer. Therefore, it would have been obvious to one of ordinary skill in the art to use the backing layer of the Solomon reference in the Japanese reference in order to impede access of air to the active layer (see column 2, lines 44-58).

8. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached at (571) 272-1478. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Terrel Morris/
Supervisory Patent Examiner
Group Art Unit 1794